

**Installation Guide**  
*Series 4000 Badge Timeclock*

# Series 4000

*Presents instructions for installing the Series 4000 badge timeclock and performing basic configuration. Includes instructions for troubleshooting installation-related problems.*



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#### EN 55022 (CISPR 22)

This product is a Class A product. In a domestic environment, it may cause radio interference in which case the user may be required to take adequate measures.

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## *Checklist of Installation and Configuration Tasks*

- \_\_\_\_\_ **Unpack and inspect the Series 4000 badge timeclock.** See page 1-2.
- \_\_\_\_\_ **Determine a suitable location for the Series 4000 timeclock.** See page 1-4.
- \_\_\_\_\_ **Obtain communication settings to be used for the Series 4000 timeclock** from your network administrator. Settings include device ID, IP address, subnet mask, and gateway.
- \_\_\_\_\_ **Plan access for Ethernet cable connections to and into the Series 4000 timeclock.** See page 1-6.
- \_\_\_\_\_ **If necessary, widen the badge reader slot.** See page 2-5.
- \_\_\_\_\_ **Prepare the location for the Series 4000 timeclock.** See page 2-2.
- \_\_\_\_\_ **Mount the timeclock base.** See page 2-8.
- \_\_\_\_\_ **Assemble the Series 4000 timeclock and connect all cables.** See page 2-12.
- \_\_\_\_\_ **Remove the mylar strip from the lithium battery** on the inside cover of the timeclock. See page 2-21.
- \_\_\_\_\_ **Plug in the Series 4000 timeclock and verify that it is operating properly.** See page 2-21.
- \_\_\_\_\_ **Perform local configuration** at the Series 4000 timeclock. See page 3-1.
- \_\_\_\_\_ **Add the Series 4000 timeclock as a device in your ADP system.** For guidance based on the host application you are using, see page 3-9.
- \_\_\_\_\_ **Test communication between the host application and the Series 4000 timeclock.** For guidance based on the host application you are using, see page 3-9.
- \_\_\_\_\_ **Perform remote configuration using installed ADP software.** Includes defining the badge timeclock's features, functions and transactions. For guidance based on the host application you are using, see page 3-9.
- \_\_\_\_\_ **Perform configuration at the ADP host application and download information to the Series 4000 timeclock.** For guidance based on the host application you are using, see page 3-9.





## *Chapter 1*

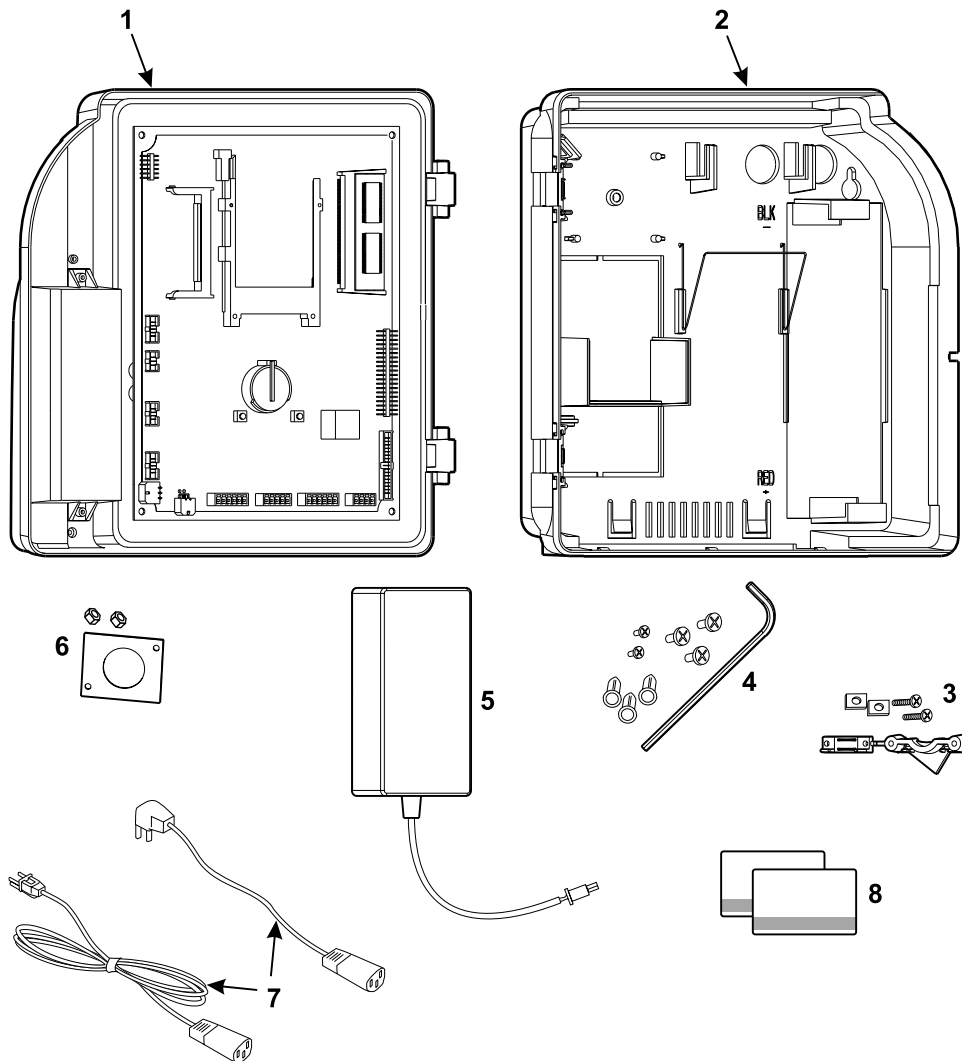
# ***Before You Install the Series 4000 Timeclock***

This chapter contains the following sections:

- ♦ Unpacking and Inspecting the Timeclock
- ♦ Determining Where to Install the Timeclock
- ♦ Tools Required to Install the Timeclock

## Unpacking and Inspecting the Timeclock

Carefully remove the contents from the box. Refer to the following illustration and the listing on the next page to ensure you have all of the parts of the timeclock.



MLinst01

Number	Part
1	Cover assembly, including an integral bar code reader
2	Base of the timeclock and hinge
3	Power cord strain relief clip, with two screws and two nuts (packed with other accessories in a plastic bag)
4	Security wrench, three pointed mounting screws, three anchors, and two flat screws (not pointed)
5	Transformer
6	Plate and two nuts to convert square cable access opening in the timeclock to a round opening (packed with other accessories in a plastic bag)
7	Two power cords: 6 ft. (182.88 cm) to plug the timeclock into an external AC outlet; 12 in. (30.48 cm) to plug in a timeclock mounted over an AC outlet*
8	One supervisor badge, one maintenance badge (packed with other accessories in a plastic bag)

\* If you are located outside of the United States and Canada, your Series 4000 timeclock does not include a power cord in the box. You must order an International Kit separately that contains the appropriate power cord for use in your country.

A mounting template is also included to help you mark the position of the timeclock.

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**Note**

If you ordered either of the option kits (backup battery, internal AC outlet), they are sent to you packaged separately in their own boxes, and with their own installation instructions.

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## Determining Where to Install the Timeclock

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### Note

For instructions about how to replace an installed ADP Series 400 timeclock, see Appendix A.

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## AC Power Source

The AC power source must be grounded 100 to 240 VAC, 50/60Hz input voltage. The timeclock uses an integrated, autosensing, AC power transformer that supports an IEC C-7 external power cord connection. This type of connection allows the use of compatible international power cords.

Use one of the following methods to supply power to the Series 4000 timeclock. The method you choose affects where and how you install the timeclock.

- ♦ **Mount over an AC outlet** (recommended)—If you are mounting the timeclock on drywall, this method secures the power connection inside the timeclock. For instructions about determining the location of the AC outlet and timeclock, see page 2-2.
- ♦ **Install an internal AC outlet**—If you cannot mount the timeclock over an AC outlet (for example, if you are mounting the timeclock on masonry), use the internal AC outlet option (purchased separately from ADP). This method secures the power connection inside the timeclock. For instructions about preparing the location of the timeclock, see page 2-3.
- ♦ **Mount near an AC outlet**—If you cannot mount the timeclock over an outlet or use the internal AC outlet option, mount the timeclock near an AC outlet. This method does **not** protect against the power cord from being deliberately or inadvertently unplugged from the outlet. You must plug the timeclock directly into the AC outlet; do **not** plug the timeclock into an extension cord or power strip. For detailed instructions, see page 2-4.

## **ADA Compliance Considerations**

Consider the following for compliance with the Americans with Disabilities Act (ADA). These are the regulations in effect at the time this documentation was written; if you are in doubt about the regulations, ADP recommends that you check the current ADA requirements.

- ♦ Plan the installation so that when you mount the timeclock, the top two mounting screws are no higher than 54 and 3/8 inches (138.09 cm) above the floor. This ensures that no part of the timeclock that personnel will physically use (badge reader, keypad) will be higher than the limit set by ADA.
- ♦ Devices mounted on a wall must not protrude more than 4 inches (10 cm) from the wall. You must mount the timeclock directly to the wall.

## **Environmental Considerations**

Consider the following when deciding where to install the Series 4000 timeclock:

- ♦ The timeclock is designed for mounting on walls in typical office and indoor manufacturing environments. Recommended wall surfaces are drywall (sheetrock) and wood.
- ♦ The timeclock can withstand the following temperature and humidity ranges:
  - Temperature ranges  
Operating: 0 to 40 degrees Celsius (32 to 104 degrees Fahrenheit)  
Storage: -20 to +70 degrees Celsius (4 to 158 degrees Fahrenheit)
  - Humidity range (operating and storage): 10% to 95% non-condensing
- ♦ Install the timeclock in an area where the timeclock screen is not exposed to direct sunlight or other high-intensity lighting that could make the screen difficult to read.

## **Adherence to Local Codes**

Installation of the Series 4000 timeclock, including all electrical wiring, must comply with all applicable national, federal, state, and local codes and standards.

## Ethernet Cabling Considerations

The Series 4000 timeclock supports 10BASE-T or 100BASE-T Ethernet communication and autosensing between 10Mbit and 100Mbit. Ethernet communication requires an RJ-45, 8-wire connection.

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### Note

Ensure that your Ethernet cable meets all applicable wiring code specifications.

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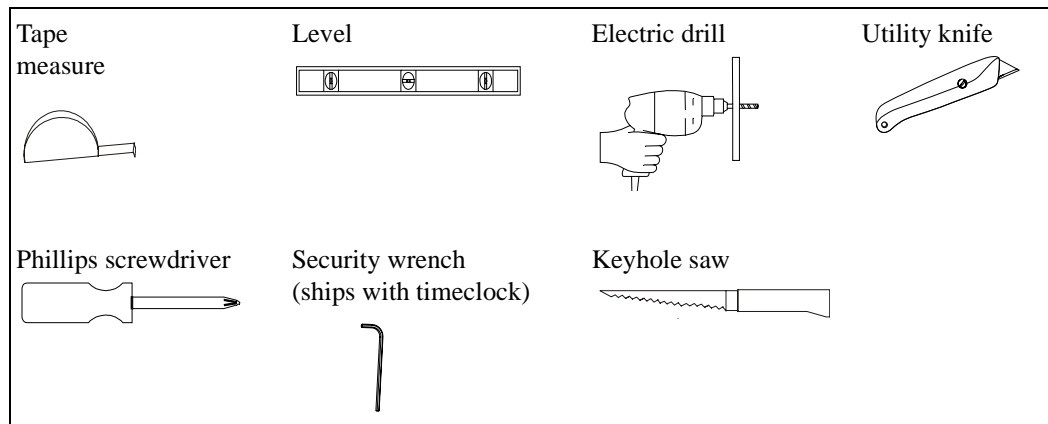
Note the following important information:

- ♦ If you plan to run Ethernet cable through the wall to the timeclock, run the cable before you install the timeclock. Ensure that the cable exits the wall at a point where it can enter the installed timeclock, and that you provide at least 20 inches (50.8 cm) of slack from the point of entry into the timeclock.

Instructions for marking the point of entry into the timeclock are presented in “Preparing the Location of the Timeclock,” beginning on page 2-2.

- ♦ To connect to an external wall jack, install the timeclock in a location that allows an easy and secure connection to the jack. You must run an Ethernet cable from its connection inside the timeclock, through a conduit hole in the bottom of the base, and to the external jack.

## **Tools Required to Install the Timeclock**







## *Chapter 2*

# ***Installing the Series 4000 Timeclock***

This chapter contains the following sections:

- ♦ Preparing the Location of the Timeclock
- ♦ Mounting the Base of the Timeclock
- ♦ Assembling the Timeclock
- ♦ Supplying Power to the Timeclock and Verifying Operation

## Preparing the Location of the Timeclock

This section explains how to mark and prepare the timeclock location, depending on how you plan to supply AC power to the timeclock.

### Preparing a Location Over an AC Outlet

This is the recommended method of mounting the timeclock.

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#### Caution

You must have a licensed electrician install the AC outlet **before** you install the Series 4000 timeclock.

The AC line that supplies power to the timeclock must be equipped with an appropriate disconnect device (proper fuse or circuit breaker). Do not connect the Series 4000 timeclock's power line to circuits being used for electrical devices that draw large amounts of power, such as air conditioning units, electrical motors, and compressors. Also avoid running communications cable near devices that interfere with data transmission.

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#### Attention

Vous devez faire appel à un électricien agréé pour installer la prise c.a. **avant** d'installer le terminal Series 4000.

La source utilisée pour alimenter le terminal doit être munie d'un dispositif de disjonction adéquat (fusible ou disjoncteur de circuit). Ne branchez pas le terminal Series 4000 sur les mêmes circuits que ceux qui alimentent des appareils électriques qui consomment beaucoup de courant, comme les climatiseurs, les moteurs et les compresseurs. En outre, assurez-vous que le câble de communication ne passe pas près d'appareils électriques qui pourraient causer des interférences et nuire à la transmission des données (par exemple, les gros moteurs, les ballasts et les transformateurs).

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1. Tape the mounting template at the desired height and location for the timeclock. The top two mounting screws must be no higher than 54 and 3/8 inches (138.09 cm) above the floor, for ADA compliance.
2. Mark the location for the AC outlet and the mounting screw holes.
3. If you plan to run Ethernet cable through the wall to enter the timeclock from the back, use the template to mark the point of entry.
4. Have a licensed electrician install the AC outlet.
5. If necessary, run the Ethernet cable through the wall and out the point of entry into the timeclock. Provide 20 inches (50.8 cm) of slack.

Go to “Widening the Badge Reader Slot (optional)” on page 2-5 and then to “Mounting the Base of the Timeclock” on page 2-8.

## **Preparing a Location to Use an Internal AC Outlet**

1. Tape the mounting template at the desired height and location for the timeclock. The top two mounting screws must be no higher than 54 and 3/8 inches (138.09 cm) above the floor.
2. Mark the location of the mounting screw holes.
3. If you will run an AC power line through the wall and into the timeclock, mark the cable’s point of entry into the timeclock, as indicated on the template.  
  
You can also choose to run the AC power line externally, through conduit, and in through the bottom of the timeclock. To do this, the AC power line must be CL-2 or higher.
4. If you plan to run the Ethernet cable to enter the timeclock from the back, use the template to mark the point of entry.
5. Run the AC power line and Ethernet cable to the timeclock location. For the Ethernet cable, allow 20 inches (50.8 cm) of slack.

Go to “Widening the Badge Reader Slot (optional)” on page 2-5 and then to “Mounting the Base of the Timeclock” on page 2-8. You will assemble and connect the internal AC outlet after you install the base.

## Preparing a Location Near an AC Outlet

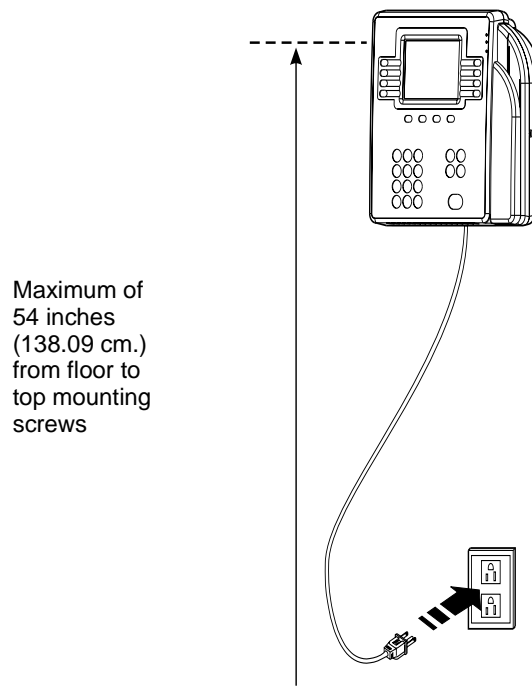
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### Note

Use this method only if you cannot mount the timeclock over an AC outlet or use the internal AC outlet option. This method does **not** protect against the AC power cord from being deliberately or inadvertently unplugged from the outlet.

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1. Select a location where the distance from the knockout for the power cable at the bottom of the timeclock to the AC outlet is not more than 5 feet (152.40 cm). Also, the top two mounting screws must be no higher than 54 and 3/8 inches (138.09 cm) above the floor.

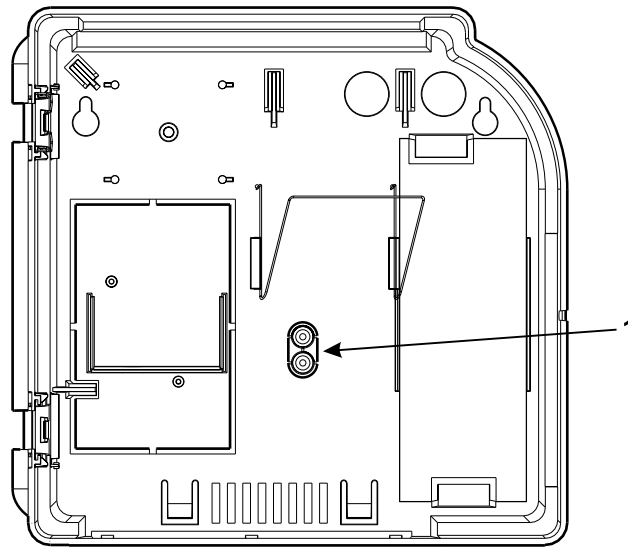


2. Tape the mounting template at the desired height and location.
3. If you plan to run the Ethernet cable through the wall to enter the timeclock from the back, mark the point of entry as indicated on the template.

4. Mark the location of the mounting screw holes. The top two mounting screws must be no higher than 54 and 3/8 inches (138.09 cm) above the floor, for ADA compliance.
5. If necessary, run the Ethernet cable through the wall at the point of entry into the timeclock. Provide 20 inches (50.8 cm) of slack.

### **Widening the Badge Reader Slot (optional)**

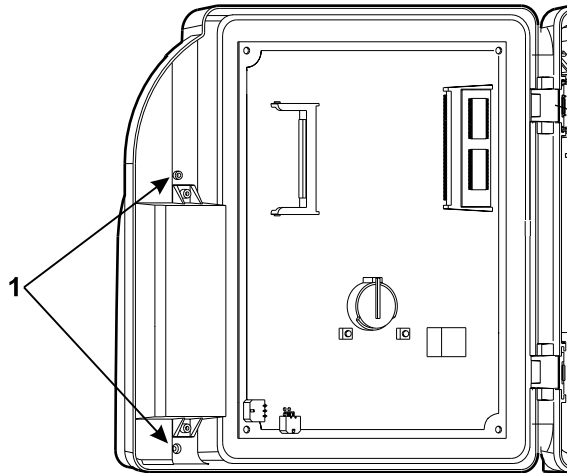
If the badges you will use with the timeclock are more than .050 in (1.27 mm) thick, you need to install two spacers in the badge reader to accommodate the badges. Otherwise, go to “Mounting the Base of the Timeclock” on page 2-8. The spacers are molded into the base of the timeclock.



Mlinst54

Number	Description
1	Badge reader spacers molded into the base.

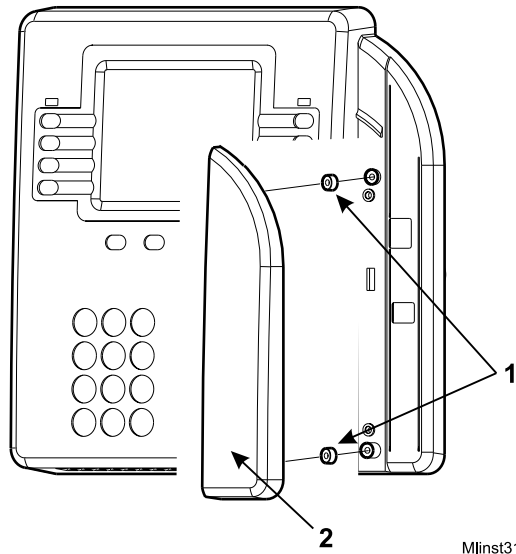
1. Use a utility knife to remove the spacers from the base.
2. Use a Phillips screwdriver to loosen the two captive screws inside the timeclock cover that hold the badge reader cover in place.



MInst30

Number	Description
1	Screws that hold the badge reader cover in place

3. On the outside of the timeclock cover, press the two spacers onto the tops of the channels that hold the screws for the reader cover. (See the following illustration.)
4. Position the reader cover back into place and tighten the two screws.



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Number	Description
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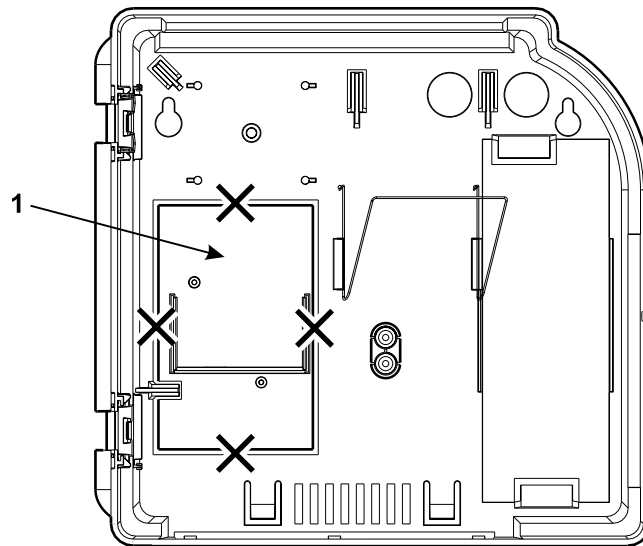
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- |   |                      |
|---|----------------------|
| 1 | Badge reader spacers |
| 2 | Reader cover         |
-

## Mounting the Base of the Timeclock

After you have properly prepared the location for the timeclock, use the following procedure to mount the base of the timeclock to the wall:

1. If you are installing the timeclock over an AC outlet, remove the knockout in the base of the timeclock. Do this by cutting the plastic tabs with a keyhole saw. Refer to the following illustration for the location of the knockout.



MInst04

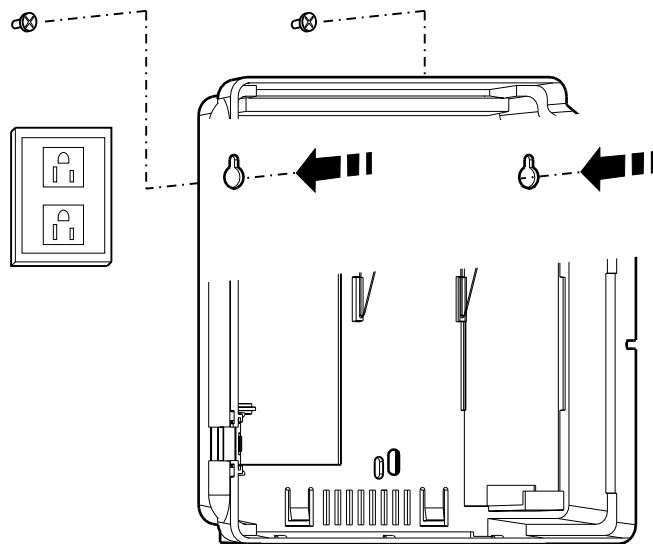
Number	Description
1	Knockout for AC outlet (plastic tabs indicated by "X")



2. If you are mounting the timeclock on **wood**, drill pilot holes for the mounting screws. Use a drill or screwdriver to drive the top two mounting screws (supplied with the timeclock) into the wall, leaving 1/4 inch (6 mm) between the head of the screw and the wall.

If you are mounting the timeclock on **drywall**, do the following:

- a. Use a 9/32 inch drill bit (7.1 mm) to drill holes for the wall anchors.
  - b. Install the wall anchors.
  - c. Install the top two screws, leaving 1/4 inch (6 mm) between the head of the screw and the wall.
3. Align the top two screw holes in the base of the timeclock with the screws in the wall, and gently set the base in position.



MInst05

4. Tighten the top two screws.
5. Install and tighten the bottom screw to secure the base to the wall.

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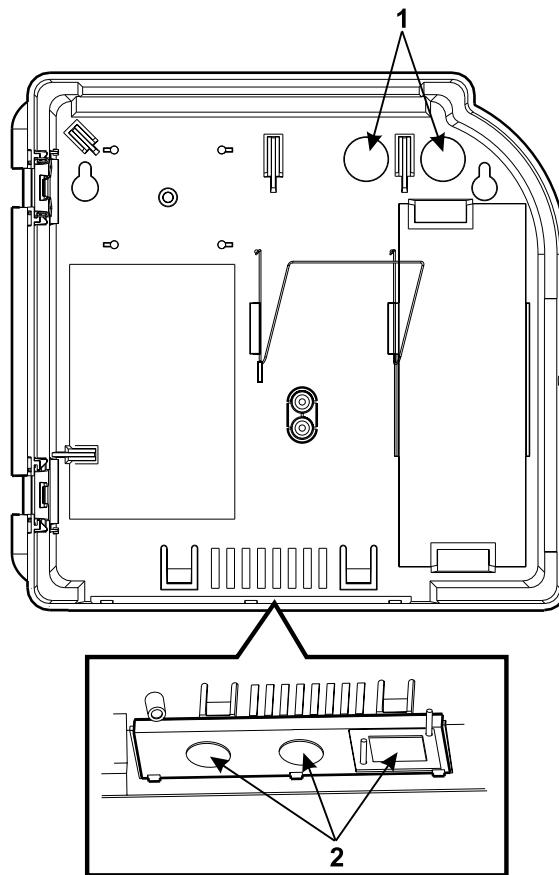
**Note**

Do not install the screws too tightly. If the wall surface is not smooth, you could crack the housing by excessive tightening of the screws.

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## Running Cables Into the Timeclock

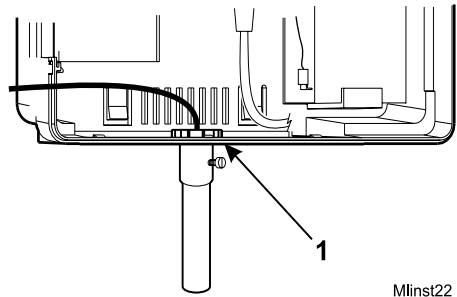
The base of the timeclock has cable access holes in the top right portion of the base and in the metal plate at the bottom of the base. See the following illustration.



MInst08

Number	Description
1	Access holes for running cables into the back of the timeclock
2	Access holes for running cables into and out of the timeclock

Use the following guidelines and procedures when routing cables in and out of the timeclock:

Routing cables through the wall and into the timeclock	For the Ethernet cable, ensure that there is at least 20 inches (50.8 cm) of slack after the point of entry into the timeclock.
Routing an external cable up through the bottom of the timeclock	<p>Use the round access holes in the metal plate at the bottom of the timeclock as follows:</p> <ol style="list-style-type: none"><li>1. Remove a round knockout for conduit by pressing on it firmly and carefully.</li><li>2. Install a cable clamp in the conduit opening.</li><li>3. Run the cable through the clamp, providing the following slack:<ul style="list-style-type: none"><li>♦ AC power line: 12 inches (30.48)</li><li>♦ Ethernet cable: 11 inches (27.94 cm)</li></ul></li><li>4. Tighten the screws on the clamp to secure the cable.</li></ol> <p>The following illustration shows how your cable routing should look. Callout 1 indicates the location of the cable clamp assembly.</p> <div data-bbox="820 1050 1274 1344"><p>Mlinst22</p></div>
Routing the AC power cord from inside the timeclock to an external AC outlet	<p>Later in the installation procedure, you will use the rectangular access hole in the metal plate at the bottom of the timeclock, securing the cable with the strain relief assembly.</p> <p><b>Note</b></p> <p>If you want to run an AC power line through conduit, the line must be CL-2 or higher.</p>

## Assembling the Timeclock

After you have mounted the base of the timeclock to the wall (see “Mounting the Base of the Timeclock” beginning on page 2-8), you are ready to assemble and connect the parts of the timeclock.

---

### Note

The illustrations in these procedure show a timeclock installed directly over an AC outlet. However, the procedure notes alternative steps if you are using the internal AC outlet option or mounting the timeclock near a wall outlet.

---

## Installing the Optional Internal AC Outlet

If this timeclock will use an internal AC outlet, refer now to the instructions in the *Internal AC Outlet Option Kit Installation Guide* that you received with the option kit. Before you begin the internal AC outlet installation, ensure that power to the AC line is shut off.

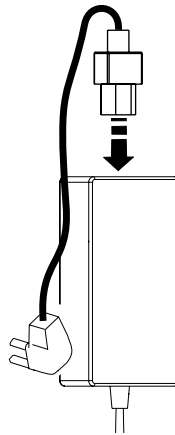
When you finish installing the internal AC outlet, follow the instructions under “What To Do Next” in that guide.

## Installing the Optional Backup Battery

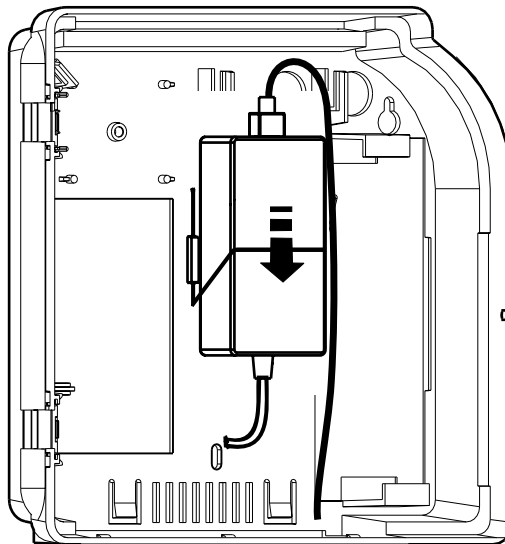
To install the backup battery, refer now to the instructions in the *Backup Battery Option Kit Installation Guide* that you received with the option kit. When you finish installing the backup battery, return to this guide to complete the installation of the timeclock.

## **Installing the Transformer**

1. Plug the power cord into the transformer. Use the 12-inch (30.48 cm) cord if you mounted the timeclock over an AC outlet or are using the internal AC outlet option. Use the 6-foot (182.88 cm) cord if you are using an external AC outlet. The following illustration shows the 12-inch power cord.



2. Position the transformer behind the wire clip in the timeclock base.



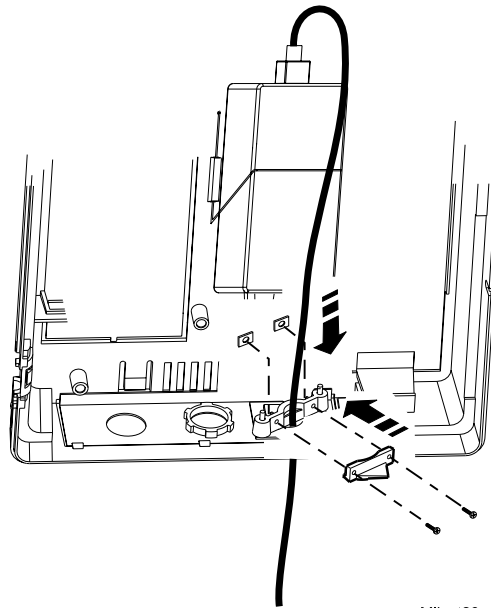
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**Warning**

Do **not** plug the power cord into the AC power source yet.

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3. If you ran the power cord through the square cable access hole in the bottom of the timeclock, use the supplied strain relief clip and screws to secure the cord. Assemble the strain relief clip, nuts, and screws, as shown in the following illustration.

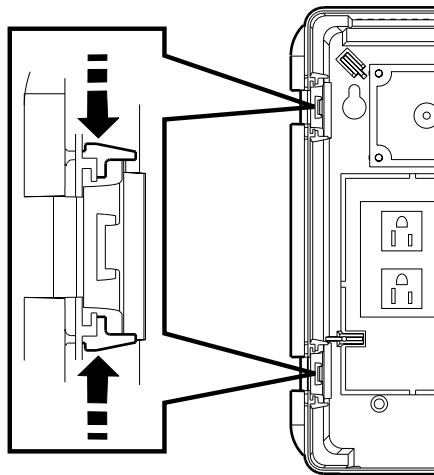


If you did **not** use the square cable access hole in the bottom of the terminal to run the power cable, cover the access hole using the square black plate and two nuts that shipped with the terminal. To do this:

- a. Slip the square plate over the screw posts located at two corners of the access hole.
- b. Screw the two nuts onto the posts to secure the plate in place.

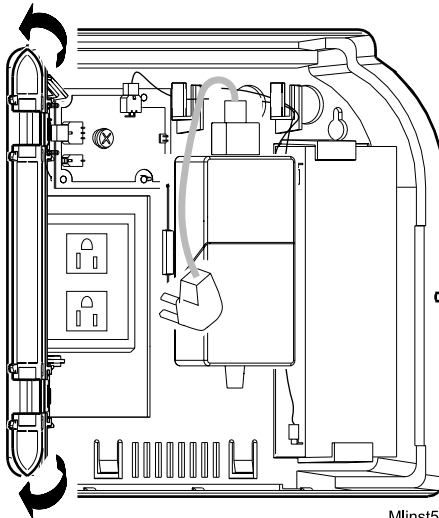
## **Attaching the Timeclock Cover to the Base**

1. Release the plastic hinge clip by squeezing the retainers at each hinge position. Squeeze each retainer one at a time until you feel the clip release.



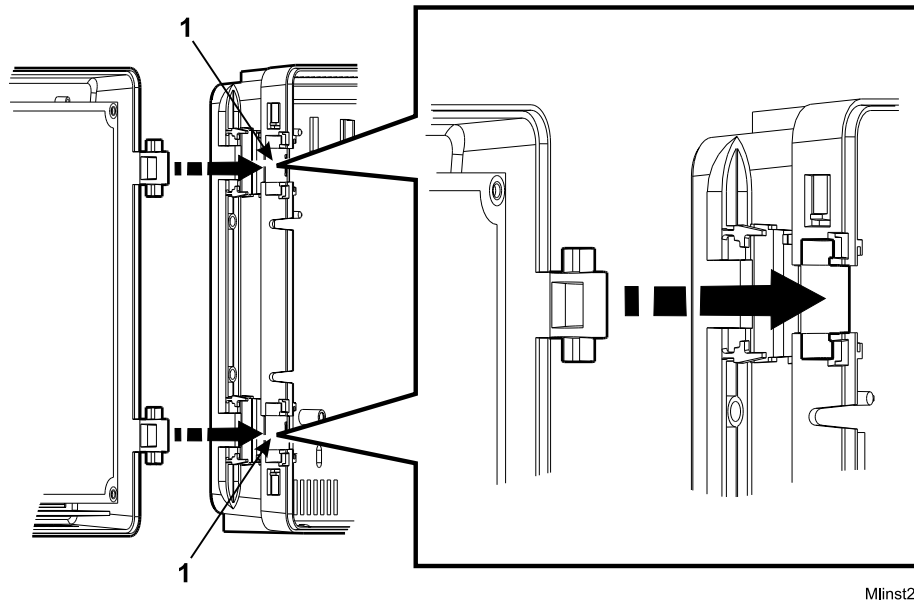
MInst14

2. Rotate the hinge clip to the left.



MInst52

3. Fit the two hinges on the cover into the corresponding areas molded in the base.



MInst26

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Number	Description
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1	Recessed areas in the timeclock base for seating the hinges
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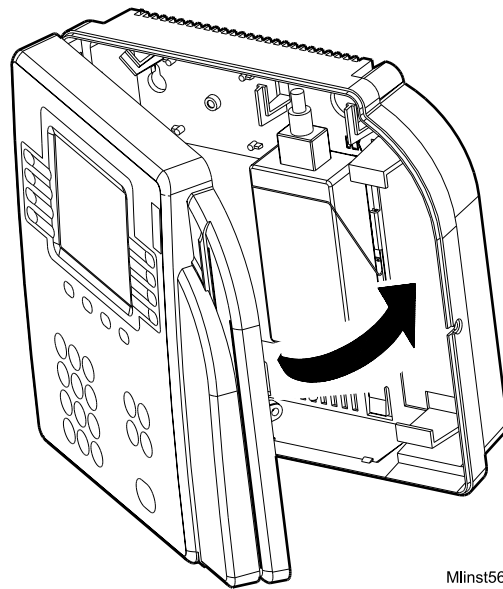
4. Carefully close the cover of the timeclock, making sure that the two hinges remain properly seated in place.

---

**Caution**

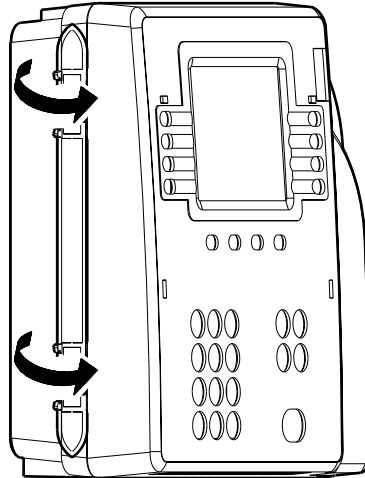
After the cover is closed, continue to hold it securely in place as you perform the next step.

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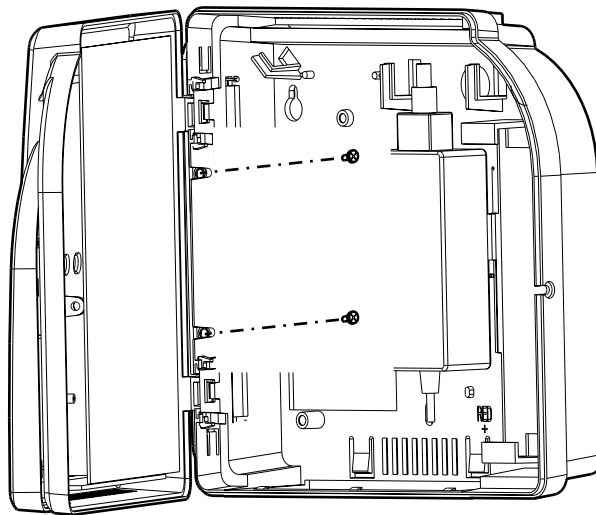


MInst56

5. Rotate the hinge clip forward until it snaps into place.



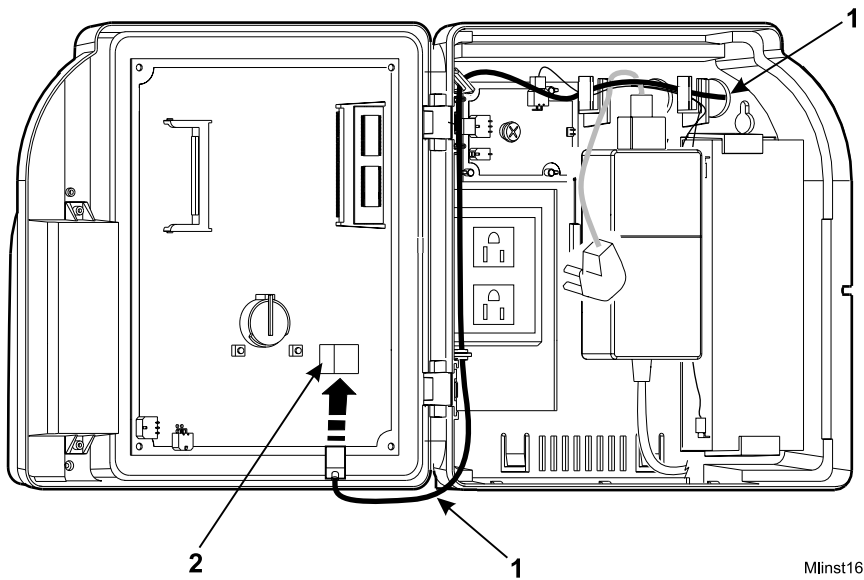
6. Open the cover and install the two small, flat (not pointed) screws to secure the hinge clip, as shown in the following illustration.



MInst57

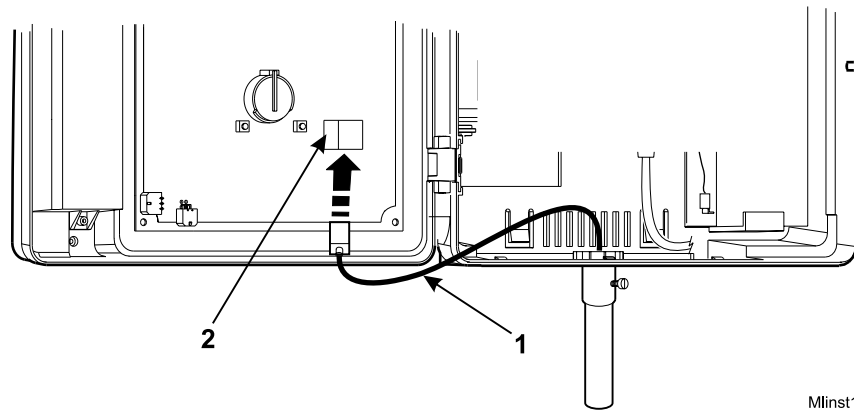
## Connecting the Ethernet Cable

The following illustration shows how to connect the Ethernet cable if you ran the cable through the wall and into the back of the timeclock. Use the hooks molded into the base of the timeclock to secure the cable along its route. Also, avoid excessive bending or crimping of the cable.



Number	Description
1	Ethernet cable (through the wall and into the back of the timeclock)
2	Ethernet connection to the timeclock's main board

The following illustration shows how to connect the Ethernet cable if you ran the cable **through the bottom** of the timeclock:



Mlinst17

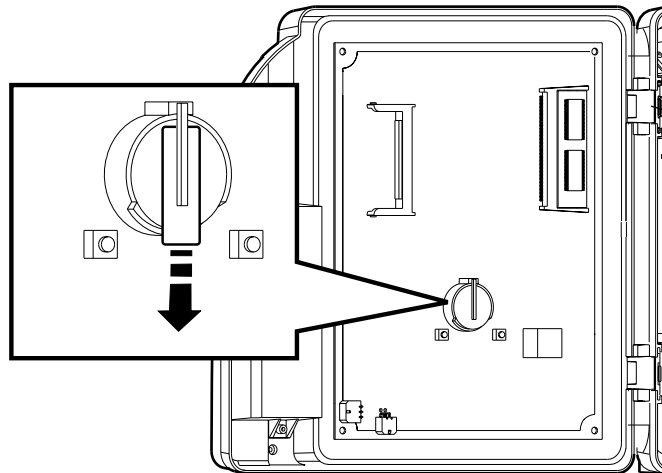
Number	Description
1	Ethernet cable
2	Ethernet connection to the timeclock's main board

## **Supplying Power to the Timeclock and Verifying Operation**

The illustrations in this section assume that you have installed the backup battery, and that you ran the Ethernet cable through the wall and into the back of the timeclock. However, the procedure in this section applies to **all** installation scenarios.

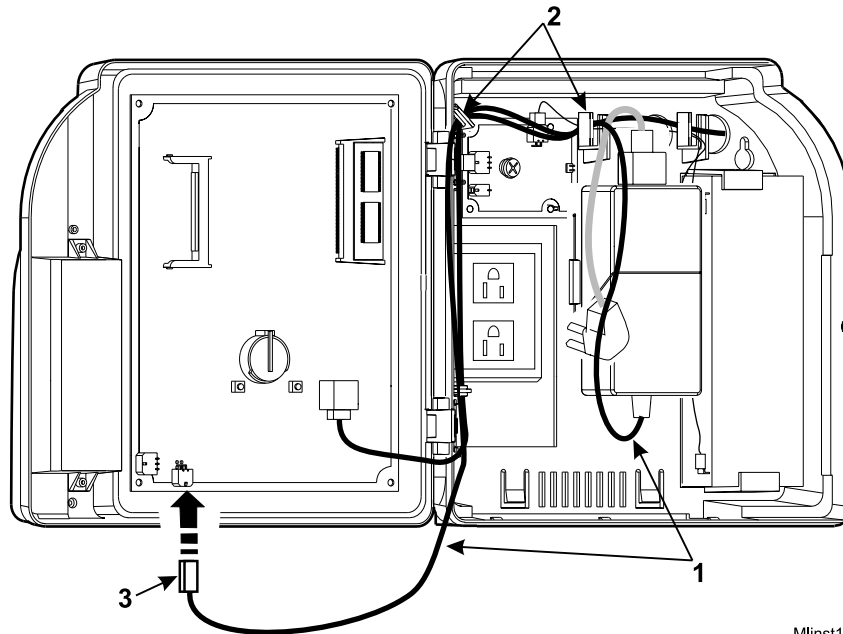
### **Supplying Power to the Timeclock**

1. Remove the mylar strip from the lithium battery located on the main board in the cover of the timeclock.



MInst49

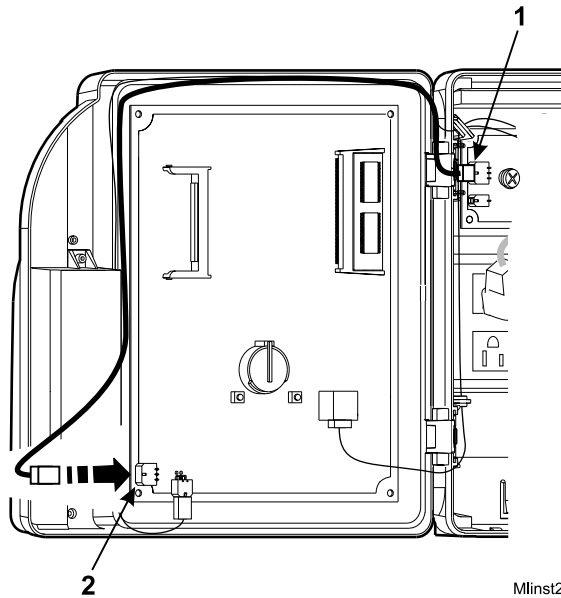
2. Connect the transformer cable to the timeclock's main board. To do this, run the cable up the **left** side of the transformer as shown in the following illustration. Use the hooks molded into the base of the timeclock and the channel along the top of the cover to secure the cable along its route.



MInst19

Number	Description
1	Transformer cable
2	Hooks for routing the cable
3	Transformer connection to the main board (DC power)

3. If you installed the battery, connect the charger board to the main board.

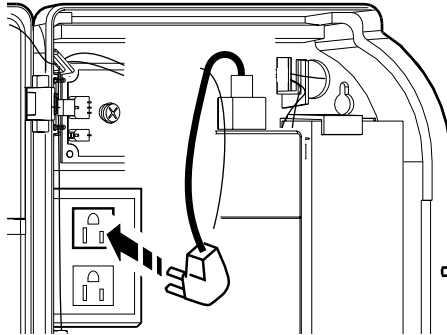


MInst23

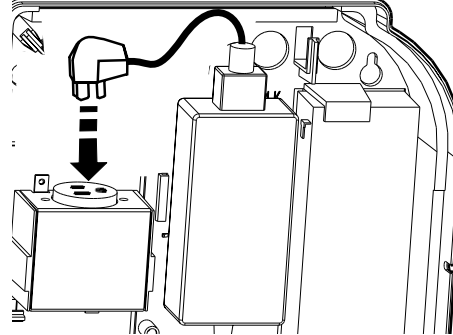
Number	Description
1	Battery charger board cable that connects to the main board
2	Charger board connection to the main board

4. Plug the transformer into the AC power source as shown. If you ran the power line to an external AC outlet, plug the cord in now.

**Over an AC outlet (top receptacle)**



**Using an internal AC outlet**



---

**Note**

When the Series 4000 timeclock is first powered and running, the optional backup battery is not yet charged. It takes approximately 24 hours for the battery to fully charge itself.

---

5. Close the cover of the timeclock enough so that you can view the display screen as the timeclock initializes itself.



## **Verifying Operation of the Timeclock**

When you supply power to the timeclock, it initializes itself, performs internal diagnostics, and starts the operating system and timeclock application. This process takes approximately one minute.

If the initialization completes successfully, the Communications Setting screen appears. Go to page 2-26, then to Chapter 3, “Performing Local Configuration.”

Changing comm settings causes a reboot!		
Device ID	<input type="text"/>	
IP Address		
Gateway		
Subnet Mask		

If the Communication Setting screen does not appear, the timeclock did not initialize successfully. Contact your TLM Representative.

## Closing and Locking the Timeclock

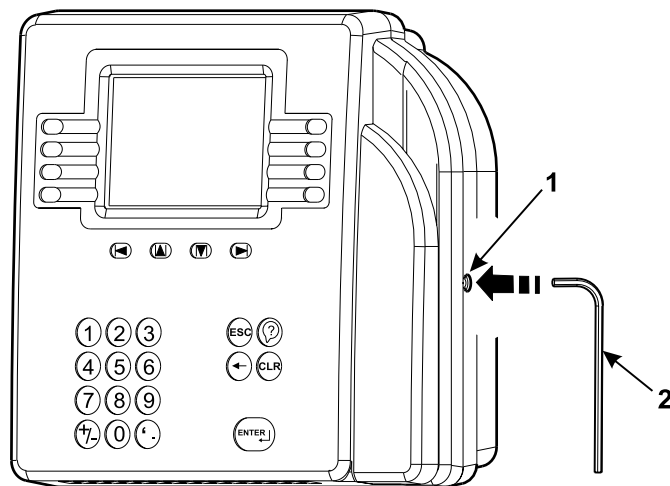
When the timeclock is operating properly, close the timeclock cover and lock it using the security wrench to tighten the security screw on the cover.

---

### Caution

When you close the cover, ensure that you are not closing it on any of the cables inside the timeclock. Do **not** force the cover when closing it.

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MInst24

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Number	Description
1	Security screw
2	Security wrench

---

You are now ready to configure the timeclock. Go to Chapter 3, “Performing Local Configuration.”

## *Chapter 3*

# ***Performing Local Configuration***

This chapter contains the following sections:

- ♦ Configuration Process Overview
- ♦ Completing Configuration Screens
- ♦ Completing the Timeclock Configuration

## Configuration Process Overview

There are two basic tasks involved in configuring the Series 4000 timeclock:

- ♦ **Local configuration**—Includes settings to establish communication with the host application, Ethernet communication characteristics, time and date, and the appearance of the display. You must perform local configuration first.
- ♦ **Remote configuration**—Includes defining which functions and transactions users can perform at the timeclocks. You use the host application to configure the timeclock.

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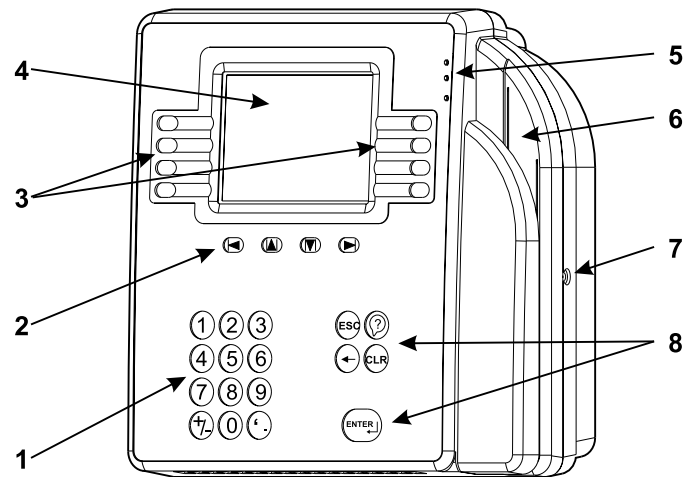
### Note

This chapter explains how to perform local configuration only.

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## Parts of the Timeclock

The following illustration shows the parts of the Series 4000 timeclock. Refer to the table on the next page for descriptions of each part indicated.



MInst53

Number	Part
1	<b>Numeric keypad for data entry</b> —Use to enter information when performing transactions and functions at the timeclock.
2	<b>Navigational keys</b> —Use to move within fields and scroll through lists.
3	<b>Soft keys</b> —Use to initiate transactions and functions at the timeclock. You program each soft key using the Data Collection Manager (DCM) if your host application is Enterprise eTIME, or Configuration Manager if your host application is eTIME.
4	<b>Display</b> —1/4 VGA screen that displays soft key labels, possible functions, transaction steps, and transaction output.
5	<b>LEDs</b> —Visual indicators: The top LED is green and flashes when the timeclock successfully reads a badge that is swiped by a user. The middle LED is amber and flashes when the timeclock does <b>not</b> successfully read a badge that is swiped by a user. The bottom LED is amber and indicates whether the timeclock is receiving power.
6	<b>Badge reader</b> (barcode)—Use to read employee, supervisor, and maintenance badges when swiping in and out and performing transactions and functions.
7	<b>Security screw</b> —Use to secure the timeclock's cover. Use the supplied security screw wrench to lock and unlock the cover.
8	<b>Additional keys</b> —ESC, Help, backspace and delete, CLEAR, and ENTER.

## Guidelines for Entering Information Using the Timeclock

Use the following guidelines when entering information using the keypad:

- ♦ To display settings for a menu item, press the soft key next to the menu item.
- ♦ To save settings on a screen, press ENTER at the last prompt.  
To cancel the transaction you are performing, press ESC at any time.
- ♦ To move the cursor in a text field, use the left and right arrow keys directly under the display.
- ♦ To move the cursor to different text fields, use the up and down arrow keys directly under the display.
- ♦ The active text field (field in which the cursor is currently located) is indicated by an outline of the text box and a flashing cursor.
- ♦ If you enter characters in a field that already contains data, the existing data is not overwritten; it is pushed to the right. To remove individual characters, position the cursor immediately to the right of the characters, and press the Backspace key (←).
- ♦ To clear all characters in a field, press the CLR key.
- ♦ If you complete a field incorrectly and move to the next field, an error message appears at the top of the display.
- ♦ To save data that you entered, press the ENTER key at the last field on the screen.
- ♦ To restore the previous settings on a configuration screen, press the ESC key.
- ♦ Black up and down arrows appear at the bottom middle of the screen if there is additional information to display before or after the current screen. The arrows look like this:



Use the up and down arrow keys directly under the screen to move to the various screens.

## Completing Configuration Screens

When the Series 4000 timeclock is first powered on and initializes (“boots up”), the Communications Setting screen appears:

Changing comm settings causes a reboot!		
Device ID	<input type="text"/>	
IP Address		
Gateway		
Subnet Mask		

1. On the **Communication Setting** screen, complete the following fields, with the help of your network administrator:

Settings	Description
Device ID	Enter an ID number (at least six digits) for the timeclock. The host application uses this number to identify the timeclock.
IP Address	Enter the IP address, including the periods, assigned to the timeclock by your system administrator.
Gateway	Enter the IP address, including the periods, of the default device that forwards data to the host application. This field holds up to 15 digits.
Subnet Mask	Specify a number that identifies a subnetwork so that an IP address can be found on a LAN. This field holds up to 15 digits.

2. Press ENTER at the last prompt. The timeclock reboots itself so that the new communications settings take effect, and then the idle screen appears:

<div> <div>2:03<sup>PM</sup></div> <div>Fri 17-Aug-2001</div> </div>	

3. Swipe the Maintenance badge that came with the Series 4000 timeclock (the badge has an “M” on the front). To do this, hold the badge so that the bar code is positioned on the back left edge and swipe the badge up or down through the reader’s slot. The Maintenance Mode menu screen appears:

<div> <div>2:03<sup>PM</sup></div> <div>Fri 17-Aug-2001</div> </div> <div>Maintenance Mode</div>	
Comm Setting	Symbology Setting
Display Setting	Restart
Audio Setting	FACTORY DEFAULT
Date/Time Setting	More...



4. To change the current appearance of text on the screen, press the **Display Setting** soft key and complete the following fields. To quickly set a field to its minimum value, press CLR.

Settings	Description
Contrast	Use the + and - keys indicated at the bottom of the screen to increase or decrease the degree of difference between light and dark extremes of color on the timeclock's display. The minimum value is 16; the maximum value is 22.
Brightness	Use the + and - keys indicated at the bottom of the screen to increase and decrease the brightness of the timeclock display.

5. Press ENTER to save the settings and return to the Maintenance Mode screen.
6. To change, enable, or disable the key click, or adjust the beeper volume, press the **Audio Setting** soft key and complete the following fields:

Settings	Description
Beeper volume	Use the + and - keys indicated at the bottom of the screen to increase and decrease the degree of beeper volume. The minimum value is 1; the maximum value is 7.
Key click	Use the Off and On keys indicated at the bottom of the screen to enable or disable the key click sound. The Off/On choices appear when you position the cursor in this field.

7. Press ENTER to save the settings and return to the Maintenance Mode screen.
8. Press the **Date/Time Setting** soft key and enter the current date and time using the indicated format.

Settings	Description
Date (mm/dd/yyyy)	Enter the current month, day, and year. For the year, enter all four digits. Do not enter the slashes.
Time (24 hour)	Enter the current time of day in 24-hour format. Do not enter the colon. For example, enter 1730.

9. Press ENTER to save the settings and return to the Maintenance Mode screen.
10. Press the **Symbology Setting** soft key and use the On and Off soft keys to indicate the type of bar codes used on your employees' badges. This allows the timeclock to read the badges properly.

Symbology Setting		
Code 3-of-9:	<input type="text"/>	Off
12-of-5:		On
UPC-A:		Off
UPC-E:		Off
Code 128:		Off
EAN-8:		Off
EAN-13:		Off
Codabar:		Off
On		Off

11. Press ENTER to save the settings and return to the Maintenance Mode screen.
12. To create a password that allows access to the Maintenance Mode screen in the future, press the **More** soft key and then the **Change Password** soft key. Complete the following fields:

Settings	Description
Old Password	Enter the old password, if there was one.
New Password	Enter the new password.
Verify Password	Enter the new password again to verify that you entered it correctly.

13. Press ENTER to save the password and return to the Maintenance Mode screen.
14. Press ESC to exit Maintenance Mode and return to the idle screen.

## Completing the Timeclock Configuration

This section lists the tasks necessary to finish configuring the timeclock, where in the host software to perform each task, and documentation to reference.

- ♦ Add the timeclock to your system configuration, and assign it to a domain and a communication channel.

Host application	What to do
eTIME	Use Configuration Manager to add data collection timeclocks (Timeclocks > Timeclocks > New). See the <i>eTIME Configuration Manager Reference</i> and the online Help.
Enterprise eTIME	In DCM, use the Device Wizard or Advanced Device Manager. See the <i>Data Collection Manager System Administrator's Guide</i> and the online Help.

- ♦ Test communication between the host application and the timeclock.

Host application	What to do
eTIME	Use Configuration Manager to test communication as part of adding a timeclock. See the <i>eTIME Configuration Manager Reference</i> and the online Help.
Enterprise eTIME	In DCM, use the Device Manager. See the <i>Data Collection Manager System Administrator's Guide</i> and the online Help.

- ♦ Define the transactions you want users to be able to perform at the timeclock.

Host application	What to do
eTIME	Use Configuration Manager to define transactions that can be performed at the timeclock (Timeclocks > Timeclocks, select a timeclock, click the arrow next to the Open button, and select Basic Configuration). See the <i>eTIME Configuration Manager Reference</i> and the online Help.

Enterprise eTIME, Workforce Smart Scheduler	In DCM, use Device Manager. See the <i>Data Collection Manager System Administrator's Guide</i> and the online Help.
---	--

- ♦ Define what type of data to download from the host application to the timeclock (for example, activity codes, pay codes, labor level entries).

Host application	What to do
eTIME	Use the Configuration Manager to download the necessary data to the timeclock, based on the transactions you set up (Timeclocks > Timeclocks, select a terminal, click the arrow next to the Open button, and select Download Options). See the <i>eTIME Configuration Manager Reference</i> and the online Help.
Enterprise eTIME, Workforce Smart Scheduler	Use the Setup application to configure the features you want to use. Refer to the online Help.  In DCM, use Device Manager to download the necessary data to the timeclock, based on the transactions you set up for the timeclock. See the <i>Data Collection Manager System Administrator's Guide</i> and the online Help.

## Other Series 4000 Documentation

When you are ready to use the Series 4000 timeclock, refer to the *Series 4000 Badge Timeclock User's Guide*. This document is not shipped with the timeclock; you must order it separately.

## Chapter 4

# *Troubleshooting Hardware and Operational Problems*

This chapter presents instructions for troubleshooting and resolving problems related to physically installing the timeclock and ensuring that it is operating correctly.

Symptom	Probable Causes	Corrective Action
The Series 4000 timeclock does not power up, and the power LED is not turned on.	The transformer is not plugged in properly to the timeclock's main board, the AC outlet, or both.	<p>Check the connections to the main board and the AC outlet.</p> <p><b>Important:</b> If the power cord is not plugged into the AC outlet, do <b>not</b> plug it in until you ensure that the transformer is properly connected to the main board.</p> <p>For instructions, see "Supplying Power to the Timeclock," beginning on page 2-21.</p>
The power LED is turned on, but nothing appears on the screen.	The AC line is not live or is supplying improper voltage.	Measure voltage at AC outlet and, if necessary, locate another power source.
	The display's cable is not connected to the main board.	Contact your TLM Representative.

Symptom	Probable Causes	Corrective Action
Series 4000 timeclock fails to read badges.	The badge is unreadable or does not meet the required badge specification.	<ol style="list-style-type: none"><li>1. Inspect the badge for cleanliness.</li><li>2. Clean the badge and badge reader.</li></ol>
	The bar code on the badge is worn or scraped off.	Replace the badge.
	You did not configure the timeclock to read the symbology your badges use.	<ol style="list-style-type: none"><li>1. Access Maintenance Mode at the timeclock.</li><li>2. Press the Symbology Setting soft key.</li><li>3. Turn on the appropriate symbology.</li></ol>
	The timeclock is not enabled for the correct badge reader type or company ID code (if you are using a code).	Correct the badge reader and company ID code settings. If your host application is Enterprise eTIME, use the Data Collection Manager (DCM); if your host application is eTIME, use Configuration Manager
	The badge reader may not be working correctly.	<p>Run the Badge Test test at the timeclock:</p> <ol style="list-style-type: none"><li>1. Access Maintenance Mode.</li><li>2. On the Maintenance Mode screen, press the More soft key to display the test functions.</li><li>3. Press the Badge Test soft key.</li><li>4. Follow the prompts to conduct the test and note the result.</li></ol> <p>If the test does not indicate the problem, run a Reader Report as follows:</p> <ol style="list-style-type: none"><li>1. Access Maintenance Mode.</li><li>2. On the Maintenance Mode screen, press the More soft key twice.</li><li>3. Press the Reader Report soft key.</li></ol> <p>Note the report results and contact your TLM Representative for assistance.</p>

Symptom	Probable Causes	Corrective Action
Keypad fails to work.	The timeclock did not properly initialize the keypad or the keypad's ribbon cable is improperly connected to the mainboard.	<p>Run the Keypad Test test at the timeclock:</p> <ol style="list-style-type: none"> <li>1. Access Maintenance Mode.</li> <li>2. On the Maintenance Mode screen, press the More soft key to display the test functions.</li> <li>3. Press the Keypad Test soft key.</li> <li>4. Press various keys and note the results on the screen.</li> </ol> <p>Determine the exact nature of the problem (for example, is the cable twisted or cut?), then contact your TLM Representative.</p>
Communication fails.	Communication settings are incorrect either at the timeclock or the host PC.	<p>To check settings at the timeclock:</p> <ol style="list-style-type: none"> <li>1. Access Maintenance Mode at the timeclock.</li> <li>2. Press the Comm Setting soft key.</li> <li>3. Check and, if necessary, correct the Device ID, IP Address, Gateway, and Subnet Mask settings.</li> </ol> <p>If communication continues to fail, check the communication settings at the host PC. Refer to the documentation for your ADP host application.</p>
	Communications cabling is connected incorrectly.	<p>Ensure that all communications cables are routed correctly and connected properly.</p> <p>If the connections are secure, determine whether the cable is defective by doing the following:</p> <ul style="list-style-type: none"> <li>♦ Check to see if the green communications LED inside the Series 4000 timeclock is lit. Use the security wrench to unlock and open the cover of the timeclock. The green LED is located inside the cover and to the left of the Ethernet connection on the main board.</li> <li>♦ Check to see if the green link light on the hub to which the timeclock is connected.</li> </ul> <p>If both lights are lit, the cable is not defective. The problem may lie in the network configuration.</p> <p>If both lights are not lit, the cable may be defective. Consult with your system administrator to resolve the problem.</p>





## *Appendix A*

# ***Replacing a Series 400 Timeclock with a Series 4000 Timeclock***

This appendix contains the following sections:

- ♦ Read This First
- ♦ Disconnecting and Removing a Series 400 Timeclock

## Read This First

Before you replace an installed Series 400 timeclock with a Series 4000 timeclock at your site, note the following information:

- ♦ Remember to collect data from the Series 400 timeclock using your host application before you disconnect the timeclock.
- ♦ The Series 4000 timeclock supports Ethernet communication only; it does **not** support modem, token ring, twin axial, RS-485, or RS-232 communications. Therefore, do **not** replace a Series 400 timeclock if it does not use Ethernet communication and you want the timeclock at that location to continue using one of the other methods.
- ♦ The location of the mounting screw holes for both the Series 400 timeclock and the Series 4000 timeclock are identical. You can install the Series 4000 timeclock in exactly the same location as the timeclock you are replacing. However, ensure that the location satisfies the following requirements:
  - To comply with the Americans with Disabilities Act (ADA), the top of the timeclock cannot be greater than 54 and 3/8 inches (138.09 cm) above the floor.
  - If the Series 4000 timeclock will be plugged into a wall outlet away from the timeclock (the timeclock is not mounted to cover an AC outlet), the timeclock cannot be more than 5 feet (152.40 cm) away from the outlet.

---

### Caution

If the Series 400 timeclock you are replacing uses an internal AC outlet, you must have a licensed electrician disconnect the power line from the outlet.

---

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### Attention

Si le terminal de la série 4000 que vous remplacez est relié par une prise c.a. interne, vous devez faire appel à un électricien agréé pour débrancher la prise de la source d'alimentation.

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## **Disconnecting and Removing a Series 400 Timeclock**

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### **Caution**

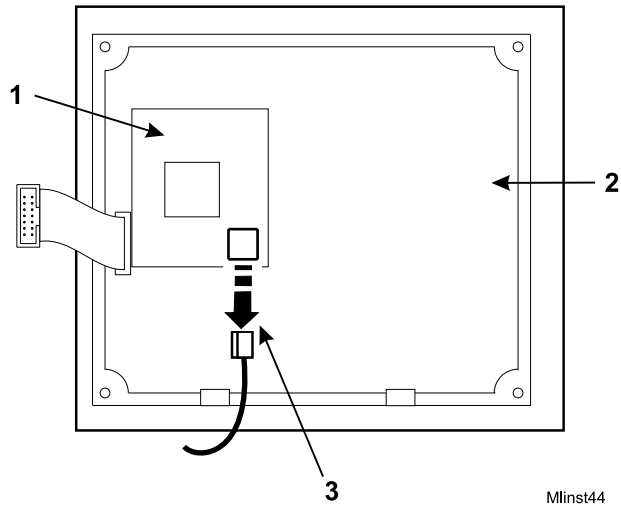
Before you begin, collect data from the Series 400 timeclock using your host application. If you do not do this now, the data will be lost.

---

To disconnect and remove a Series 400 timeclock from the wall:

1. Collect data from the timeclock, using your host application. If you do not do this now, the data will be lost.
2. Unlock the cover of the timeclock using the hex wrench that came with the Series 400 timeclock to loosen the security screw on the left side of the cover.
3. Carefully open the cover of the timeclock.
4. Disconnect the timeclock from its AC power source. Depending on how the timeclock was installed, do one of the following:
  - ♦ Unplug the power cord from an AC outlet external to the timeclock.
  - ♦ If the timeclock was mounted to cover an AC outlet, unplug the power cord from that outlet.
  - ♦ If you used the internal AC outlet option, unplug the power cord from the internal outlet.
5. If power was supplied to the timeclock using an internal AC outlet, have a licensed electrician disconnect the power line from the outlet now.

6. Disconnect the cable from the Ethernet board inside the cover of the timeclock. See the following illustration.

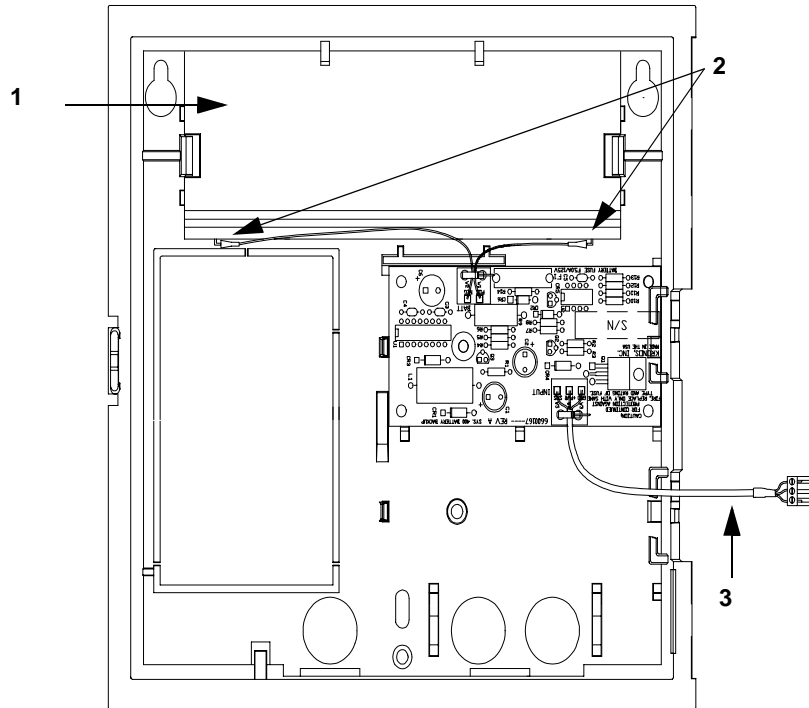


MInst44

Number	Description
1	Ethernet board
2	Main board
3	Ethernet connection

7. If the Ethernet cable was routed through the bottom of the timeclock, remove the cable from inside the timeclock.
8. If the timeclock has a backup battery, disconnect the battery as follows. Refer to the following illustration as you perform these steps.
  - a. Disconnect the battery charger board from the terminals on the backup battery.

- b. Disconnect the battery charger board from the timeclock's main board (inside the cover).



Number	Description
1	Battery
2	Battery charger board connections to the backup battery
3	Battery charger board connection to the main board

9. Remove the three mounting screws in the base of the timeclock to remove the timeclock from the wall. The screws are located in the top left and right corners, and the bottom middle of the base.

You are now ready to install the Series 4000 timeclock. For detailed instructions, go to Chapter 2, "Installing the Series 4000 Timeclock."



*Appendix B*

***Specifications and Optional Devices***

<b>Case:</b>	Black, advanced polycarbonate/ABS resin, dust and moisture-resistant
<b>Dimensions:</b>	Width: 10.75 inches (27.30 cm) Height: 11.75 inches (29.85 cm) Depth: 4 inches (10.16 cm)
<b>Shipping weight:</b>	5 lbs. (2.25 kg)
<b>Keypad:</b>	Silicon Elastomer numeric keypad and 8 programmable soft keys
<b>Power supply:</b>	50/60 Hz 110/220 V transformer
<b>Power requirements:</b>	100 to 240V, 1.5A maximum
<b>Display:</b>	4 x 40 FSTN LCD
<b>Host communications:</b>	10/100 Mbit auto-sensing Ethernet
<b>CPU:</b>	Motorola MPC 860DT
<b>Memory:</b>	16 MB RAM, upgradable to 64 MB 8 MB Flash, ability to upgrade to 100 MB
<b>Badge reader:</b>	Integrated bar code badge reader
<b>Battery backup:</b>	Optional, 12 VDC lead acid battery to provide the timeclock up to two hours of full functioning operation
<b>Operating environment:</b>	Temperature: 0 to 40 degrees Celsius, 32 to 104 degrees Fahrenheit Humidity: 10% to 95% non-condensing
<b>Shock resistance:</b>	Withstands 40 G's of force when packed in original shipping carton
<b>ESD protection:</b>	Withstands 20 kV electrostatic discharge without failures

<b>AC surge protection:</b>	Timeclock withstands AC power surges induced by lightning, the local power company, or inductive switching transients as tested in accordance with IEEE Standard 587
<b>FCC:</b>	Meets all Federal Communications Commission (FCC) requirements for Class A computing device
<b>Approvals:</b>	Underwriter's Laboratories (UL) Canadian Standards Association (CSA) European Conformity Mark (CE)

## Optional Devices

The following are optional devices that you can order separately and connect to the Series 4000 timeclock:

Device	Description
Backup Battery Option Kit (part number 8601763-002)	Rechargeable battery that you install to allow the Series 4000 timeclock to remain fully operational for up to two hours without AC power. Transactions entered while the timeclock is on backup battery power remain in the timeclock until power is restored and the data is collected from the timeclock. Comes with a <i>Backup Battery Option Kit Installation Guide</i> .
Internal AC Outlet Option Kit (part number 8601824-002)	AC outlet you can install inside the timeclock and connect to an AC power line. This allows you to secure the AC power connection inside the timeclock. Comes with an <i>Internal AC Outlet Option Kit Installation Guide</i> .